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INDIANA STATE BOARD OF HEALTH

AN EQUAL OPPORTUNITY EMPLOYER

February 24, 1989

TO: Local Health Department Personnel

FROM: Durland H. Patterson, Jr., Chief *DHP*
Residential Sewage Disposal Section

SUBJECT: Residential On-Site Sewage Disposal
Gravelless Systems

On November 28, 1988, I forwarded to each of your local health departments a copy of my letter of that same date which had been addressed to Mr. Timothy Lang, Product Manager, Advanced Drainage Systems, Inc. In that letter, I outlined to Mr. Lang the conditions under which we would not object to the installation of their concept of a gravelless on-site sewage disposal system to serve an individual residence.

That letter was not an "approval" of their product, and should not be considered as such. The State Board of Health does not issue general approvals for proprietary products. This agency does, however, set standards by which various on-site alternatives may be applied to individual properties.

This is the approach which we have taken with the use of the gravelless system. Standards have been set under which local health departments may consider the use of the gravelless system on an individual, case-by-case basis. The local health department may issue an approval, i.e. a permit, when site and soil conditions, and system design and size, fall within the standards set forth for such system.

It has also been brought to my attention that there may be a misunderstanding as to the site and soil conditions which will permit the installation of this type of gravelless system. In order to consider the use of this gravelless system, all of the following items must be met:

1. A site slope of not more than 15 percent.

"The health of the people is really the foundation upon which all their happiness and all their powers as a state depend."
--Disraeli

2. There is an adequate area available for construction of the system on the contour.
3. Any soil horizon with a loading rate of greater than 0.75 gallons per day per square foot or less than 0.25 gallons per day per square foot (based on Indiana State Board of Health loading rate charts) must be at least 34 inches from the soil surface.
4. Any seasonal high water table will be lowered to 34 or more inches from the soil surface.
5. There will be at least 24 inches of unsaturated soil with an acceptable loading rate below the bottom of the absorption field.
6. There will be at least 18 inches of soil cover provided over the system.
7. The soil conditions must permit the construction of a gravity feed trickle flow system or a gravity feed trickle flow system with alternating fields. If a pressure distribution system is required due to the presence of medium sand or loamy coarse sand, a gravelless system may not be considered an appropriate substitute, A gravelless system may not be considered a suitable alternative if a gravity feed flood dosed system or a pressure distribution system is selected in lieu of alternating fields to overcome limitations posed by a slowly permeable soil.

The question of equal distribution versus serial distribution has also been raised. In accordance with item 5 of my letter of November 28, 1988, to Mr. Lang, and Rule 410 IAC 6-8-7(H) for subsurface absorption field systems, the absorption lines shall be individually connected to a distribution box to insure equal distribution to the entire field.

A concern has been raised that the contractor will construct a gravelless system in lieu of a gravel-filled trench system after a permit has been issued for the latter type of system. The sanitarian would not be aware of this substitution until the time of final inspection. This concern may be resolved by specifying the specific system type and size on the permit and by stating that no alterations of a system design or size will be permitted without approval of the health department prior to the start of construction of the system.

If you have any questions concerning the proposed use of this type of system, please feel free to contact this office.

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